

**From:** Peterson, Lance  
**To:** [Sheldrake, Sean](#)  
**Cc:** [BAYUK Dana](#)  
**Subject:** Gasco - Seepage meter data gap investigation oversight - Friday September 8, 2017  
**Date:** Friday, September 8, 2017 5:17:45 PM  
**Attachments:** [Proposed seepage meter location map Summer 2017 Sampling Memo.pdf](#)

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## WORK ACTIVITIES CONDUCTED

Jason Silvertooth from CDM Smith was present to conduct safety and seepage meter data download and retrieval oversight at the Gasco project area from 09:00 to 13:35 hours on Friday, September 08, 2017. The purpose of the site visit was to perform health and safety oversight of diving activities and in-water work, and monitor work progress. The objective of the work is to deploy seepage meters to evaluate groundwater seepage into the Willamette River adjacent to the Gasco site. The work was performed by NW Natural's contractors Anchor QEA, Coastal Monitoring Associates (CMA), and Research Support Services (RSS). The weather was overcast (due to wildfires in the region), with a high of approximately 75 degrees Fahrenheit.

At 09:00 hrs., the CDM Smith representative arrives at the Cathedral Park boat ramp, which is the designated meeting point for the project. Anchor QEA, CMA, and RSS are preparing the boats and GPS for the day's work.

At 09:15 hrs., the safety meeting is conducted by Jason Silvertooth (CDM Smith) and Holly Samaha (Anchor QEA). Also present at the meeting are Bart Chadwick (CMA), Chris Smith (CMA), Alan Sims (CMA), Eric Parker (RSS), Dale Dickenson (RSS), Viktor Gazarian (RSS), and Andrew Muth (RSS). The following topics are discussed during the meeting:

1. The procedure for retrieving and decontaminating the seepage meters is reviewed. During seepage meter decontamination, all personnel not performing decontamination will remain clear of the spray area.
2. Safe lifting practices are discussed. The diver tanks and seepage meters are heavy, so caution will be taken to lift with the legs and to use buddy lifting when necessary.
3. During dive operations there are potential slip, trip, and fall hazards, including water near the bow and the diver tending line. Good housekeeping will be practiced and project personnel will be sure to maintain awareness of potential slip and trip hazards while working.

At 09:50 hrs., the boat is in place at location GRD-04 (see attached map for proposed locations). The dive flag is raised to position at the top of the A-frame, and Eric Parker (RSS) calls the U.S. Coast Guard, Multnomah County Sherriff, and Willamette River boat traffic to provide notification of diving operations. Communication checks are performed with the diver masks.

At 10:00 hrs., the process of downloading data and collecting the seepage meter at GRD-04 begins.

At 11:20 hrs., the data download is complete and the seepage meter has been retrieved and decontaminated at GRD-04. During decontamination procedures, a small black spot is observed on the flange of the seepage meter. It is uncertain if it was an existing mark or related to the site, but is scrubbed off and rinsed using soap, a paper towel, and potable water.

At 11:40 hrs., the boat is in place at location GRD-2, and the process of downloading data and collecting the seepage meter at GRD-02 begins.

At 13:10 hrs., the data download is complete and the seepage meter has been retrieved and decontaminated. During decontamination procedures, no visible contamination or sheen is observed. After retrieving the meter, the diver flag was lowered and Eric Parker notifies the U.S. Coast Guard and Willamette River traffic that dive operations are complete.

At 13:35 hrs., CDM Smith and Anchor QEA representatives are off the boat and demobilize from the site. All site operations are complete for the day.

#### HEALTH AND SAFETY ISSUES

None noted.

#### ACTIVITIES DISCUSSED

The seepage meters are all to be deployed for three days. Seepage meters to be collected on 9/9/17 are at locations GRD-05 and GRD-06. The project team will meet at Cathedral Park at 09:00 hrs. on 9/9/17 to allow three full days of data collection.

#### PHOTOS

Refer to previous emails sent on 9/8/17 for photos of decontamination procedures

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